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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.       | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------------|------------------|
| 10/062,507   | 02/05/2002  | Seoung Keun Ahn      | 2950-0202P                | 2749             |
| 2292   | 7590        | 04/04/2006           | EXAMINER<br>KUMAR, PANKAJ |                  |
| BIRCH STEWART KOLASCH & BIRCH<br>PO BOX 747<br>FALLS CHURCH, VA 22040-0747 |             |                      | ART UNIT<br>2611          | PAPER NUMBER     |

DATE MAILED: 04/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                                      |                                   |  |
|------------------------------|--------------------------------------|-----------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/062,507 | <b>Applicant(s)</b><br>AHN ET AL. |  |
|                              | <b>Examiner</b><br>Pankaj Kumar      | <b>Art Unit</b><br>2611           |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 23 January 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1,3-7,9-14 and 16-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,3-7 and 9-12 is/are allowed.
- 6) ☒ Claim(s) 13,14 and 16-19 is/are rejected.
- 7) ☒ Claim(s) 15 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection. David Bilodeau was called on 3/30/2006, as suggested in his response to arguments, to say that there are new references cited based on amendment. He said that section of the arguments is standard boiler plate language and thus he seemed to be saying that there was not a need to call him about this.

### ***Response to Amendment***

#### ***Specification***

2. The abstract of the disclosure is objected to because it should not contain legal terminology such as the word "said". Correction is required. See MPEP § 608.01(b).

### ***Information Disclosure Statement***

3. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 13, 14, 16-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakagawa USPN 6,879,637 in view of Howe USPN 6,112,324. Here is how the references teach the claims:

6. As per claim 13, Nakagawa teaches receiving modulated channel data (Nakagawa fig. 2: 22 receiving data from 12; fig. 1: system receiving modulated data which needs to be demodulated); inserting a sync pattern in the channel data at intervals (Nakagawa fig. 2: 22; fig. 1: 14), wherein a total number of bits inserted for the sync pattern is varied (Nakagawa col. 8 lines 5-6, 51-67; table 4, 5) based on whether the sync pattern represents a sector sync pattern or a frame sync pattern (not in Nakagawa but would be obvious as explained below).

7. Nakagawa does not teach varying based on whether the sync pattern represents a sector sync pattern or a frame sync pattern. Howe 6112324 teaches varying based on whether the sync pattern represents a sector sync pattern or a frame sync pattern (Howe col. 17 lines 27, 31: 27 channel bit frame sync, 12 byte sector sync). Thus, it would have been obvious, to one of ordinary skill in the art, at time the invention was made, to arrive at varying based on whether the sync pattern represents a sector sync pattern or a frame sync pattern as indicated by the instant claims, because the combined teaching of Nakagawa with Howe suggest varying based on

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whether the sync pattern represents a sector sync pattern or a frame sync pattern as indicated by the instant claims. Furthermore, one of ordinary skill in the art, would have been motivated to combine the teachings of Nakagawa with Howe because Nakagawa suggests varying bits (something broad) in general and Howe suggests the beneficial use of varying bits based on frame and sector such as to minimize overhead of user to gross total bytes (Howe col. 10 lines 48-52) as sectors are larger than frames and both need to be synchronized (Howe col. 2 line 42 to col. 3 line 35) in the analogous art of data medium.

8. As per claim 14: wherein the total number of bits inserted for the sector sync pattern is longer than the total number of bits inserted for the frame sync pattern (Howe col. 17 lines 27, 31: 12 bytes for sector sync is equivalent to 96 bits (12bytes x 8bits/byte) for sector sync which is longer than 27 bits for frame sync).

9. As per claim 16: wherein the sector sync pattern (Howe: sector sync) consists d zeros, one, (k+3) zeros, one, and d zeros when (d, k) constraints are given (Nakagawa tables have 0s and 1s).

10. As per claim 17: wherein the frame sync pattern (Howe: frame sync) consists d zeros, one, (k+3) zeros, one, and d zeros when (d, k) constraints are given (Nakagawa: tables have 0s and 1s).

11. As per claim 18: wherein the sync pattern has 0's run longer than k when (d,k) constraints are given (Nakagawa tables have 0s running longer than 1)

12. As per claim 19: the method of claim 13 wherein the step (b) inserts the frame sync pattern before or behind non-first frame constituting channel data (Howe fig. 2 has many frames and hence there are nonfirst frames and col. 17 teaches that sync for the frames)

***Allowable Subject Matter***

13. Claims 1, 3-7, 9-12 are allowed based on amendment. See prior action for details.
14. Claim 15 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

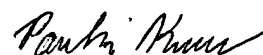
15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).
16. A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pankaj Kumar whose telephone number is (571) 272-3011. The examiner can normally be reached on Mon, Tues, Thurs and Fri after 8AM to after 6:30PM.

18. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on (571) 272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

19. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Pankaj Kumar  
Patent Examiner  
Art Unit 2611

PK